



Black Pearl®

Cold Applied Asphalt Built-Up
Roofing & Waterproofing System



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DESCRIPTION

Barrett's Black Pearl® Waterproofing System is composed of two primary products:

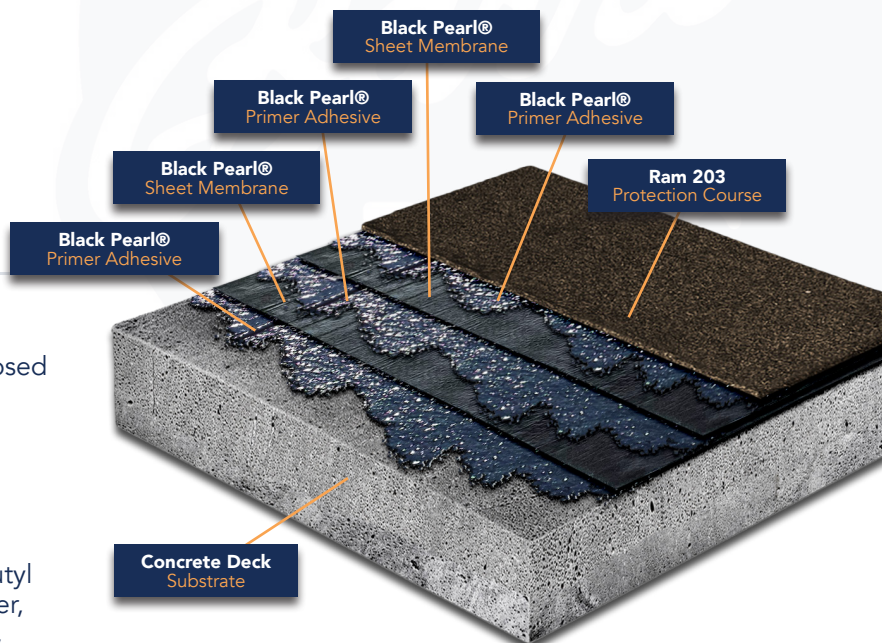
- **Black Pearl® Primer Adhesive**
- **Black Pearl® Sheet Membrane**

These components are based upon the same core formula of select, unoxidized asphalt cement base, butyl rubber, styrene isoprene styrene (SIS), neoprene rubber, styrene-butadiene-styrene rubber (SBS), carbon black, fillers, plasticizers and curing agents. The Black Pearl Primer Adhesive also has an aliphatic solvent that is within acceptable OSHA and EPA current regulations.

Black Pearl® Sheet Membrane is a 55 mil woven polyester fabric providing extra tensile strength and stability. This fabric is impregnated and coated with the Black Pearl® rubberized formula. The compatibility between the two components is 100 percent, with the Black Pearl® Primer Adhesive acting as a catalyst on the sheets and chemically fusing the system elements together (including flashings) into a thick, semi-monolithic waterproof membrane.

Most Black Pearl® applications are over concrete substrates, exterior grade plywood, blindside lagging, sheet piling, cement board and even asphalt protection boards are also acceptable substrates with some waterproofing designs. Consultation and peer reviews are encouraged and welcomed.

Black Pearl® is an all-season material that can be installed anytime between 0°F and 100°F, eliminating stocking and out of date problems. Black Pearl® systems are compatible with extruded and expanded foam boards, PVC, EPDM, drain mats, asphaltic materials and coal tar pitch. It also has the unique ability to be applied to green and damp concrete.



SURFACE PREPARATION

Check that all drains are properly installed, slightly depressed below the top of the roof deck and operative, all pipe and sleeve penetrations in place and properly secured, material storage and access areas determined and agreed to. All honeycomb, form tie holes or cones, air holes, bug holes and other defects must be parged/filled prior to membrane application and protrusions and high spots scraped down.

Any questions about concrete surface acceptability can be determined by evaluating the concrete surface using ASTM D-5295 and American Concrete Institute (ACI) ACI 117R-90, reapproved 2002, Section 4.5.6, Section 4.5.7, Detail FF 191.4 or FF 52.9 Guides. Fresh concrete that supports foot traffic is acceptable. Standing water on the concrete surface at the time of installation is not acceptable and needs to be removed. Water curing of concrete with impermeable covers is recommended when long-term curing is employed.

All metal surfaces shall be cleaned of oils, paints, silicones and rust. Power wire brushing, shot blast, sand blasting, ice blasting and similar treatments can be used as required. Formboard release agents like No. 20 weight motor oil or diesel fuel are commonly used on concrete wall forms. Do not use or go over any release agent containing motor oil, fuel oil, animal fats, or stearates. Surface applied wax based, and acrylic curing agents are not acceptable. Suspect areas must be shot blast, sand blast, ice blast or similarly treated prior to application of waterproofing to provide an acceptable surface. Frost-free surfaces are required.

MATERIALS

- Black Pearl® Primer Adhesive (3 Courses)
- Black Pearl® Sheet Membrane (2 Plies)
- Ram 200/203 Protection Course (1 Ply)
- Black Pearl® Butyl Tape Non-Hardening Tape Sealant
- KeeneSeal 100 Single Component Elastomeric Sealant



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CORNERS

Exterior and interior corners are installed with 2 plies of Black Pearl® Sheet Membrane, each cut to 10 inches wide. First, apply 20 mils of Black Pearl® Primer Adhesive to the substrate. Then, embed the first layer of Black Pearl® Sheet Membrane into the adhesive so that there are 4 inches on one side and 6 inches on the other side.

Apply a second coating of the Black Pearl® Primer Adhesive onto the surface of the first sheet at a rate of 20 mils. Use a squeegee to embed the second sheet into the coating, this time alternating so that there are 6 inches over the 4 inch side and 4 inches over the 6 inch side. Ensure that the sheet is squeegeed firmly into place without any holidays, voids or air pockets. At parapet walls, membrane assembly should extend full height and to the outside edge of the parapet unless there is a thru-wall flashing or reglet. Do not cover up any weep holes or thru-wall flashings.

DRAIN DETAILS

Carefully clean drain sumps of any process oils, rust or other contaminants with solvent and powered wire brush if required. Make sure the drain is set below or at the drainage plane to ensure there are no dams preventing the free flow of water.

Install a 39 inch square sheet of Black Pearl® Sheet Membrane into 20 mils of Black Pearl® Primer Adhesive before running the ply sheets over the field of the deck. Install all waterproofing sheets over the drain. Cut out a small circular opening with slits carefully cut back to partially conform to the drain bowl shape. Install a clamping ring and cut back interior slit sheets to within 1 to 2 inches from the inside of the clamping ring. Do not allow any laps in the clamping ring area. All drains require clamping rings.

PENETRATIONS

Cut a star pattern in the membrane slightly smaller than the outside diameter of the penetration. Coat the pipe/sleeve and surrounding base with 20 mils of Black Pearl® Primer Adhesive. Wrap the pipe/sleeve with Black Pearl® Sheet Membrane to achieve a minimum of a 2 inch lap. Cut 3 inch long fingers at the base of the wrap to extend out at the change in direction. The membrane should be installed a minimum of 8 inches above water level onto the pipe penetration and 8 inches beyond the base of the pipe penetration.

Apply a second coating of Black Pearl® Primer Adhesive onto the first layer of the sheet membrane at a rate of 20 mils, extending onto the pipe and substrate. Embed the second layer of Black Pearl® Sheet Membrane into the coating, ensuring that it is all set with no voids or bridging in the primer adhesive. If any of the Black Pearl® Sheet Membrane is above-grade and exposed to sunlight,

apply 20 mils of Black Pearl® Primer Adhesive and embed with Ram 306 bitumen modified granular cap sheet. Alternatively, surface can be covered with one coat of Ram Ultra-White® Primer, followed by two coats of Ram Ultra-White® Acrylic Latex Coating. In all cases, install stainless steel clamps at the top of flashings.

If detail of projections requires Polymethyl Methacrylate, please refer to Barrett's Ram Quick Flash PMMA technical data sheets and installation instructions.

JOINTS

Expansion joints, control joints, cold joints and pre-cast joints are all always reinforced.

Expansion Joints

For expansion joints up to 2 ½ inches, install a backer rod in the joint, leaving a ½ inch depth. Seal the opening with a layer of KeeneSeal 100, making sure that it is flush with the top of the deck. Once the sealant is fully cured, apply 20 mils of Black Pearl® Primer Adhesive 12 inches wide on both sides. Embed Black Pearl® Sheet Membrane into the coating, making sure that it is flush on both sides. Install the full system over the joint detail.

Expansion joints may take many different forms depending on manufacturers such as Watson-Bowman-Acme, Emseal, Construction Specialties, Migutan and other proprietary systems. Such assemblies may require job-specific details, which can be acquired by contacting your local Barrett representative.

Control Joints

Control joints are not required for the Black Pearl® system. If installed, however, they will need to be detailed. Apply 20 mils of Black Pearl® Primer Adhesive a minimum of 6 inches from each side of the control joint. Embed a 12 inch wide strip of Black Pearl® Sheet Membrane into the adhesive. If control joints are recessed, fill with Black Pearl® butyl tape before ply application. Install the full system over the joint detail.



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Cold Joints

For cold joints, apply 1.5 to 2 gal./square of Black Pearl® Primer Adhesive. Embed one 6 inch wide ply of Black Pearl® Sheet Membrane centered over the cold joint, ensuring that it is well adhered without any holidays, fish mouths or air bubbles. Install the full system over the joint detail.

Precast Concrete

Precast concrete decks generally require a topping slab, as recommended by ASTM and most authorities. Consult Barrett for applications over precast decks without a topping slab. Precast joint treatment will vary with pre-stressed and post-stressed T's, hollow core decks, and site conditions. Any joints that are uneven must be filled with cement-rich mortar and finished to provide a smooth transition from one plank to the next.

The joints are then stripped in, first with a 9 inch sheet and followed by a 12 inch sheet of Black Pearl® Sheet Membrane, both set in Black Pearl® Primer Adhesive (1.5 to 2 gal./square, approximate), that extends 4 inches beyond any mortar transition required by uneven joints. In cases where the mortar transition is wider than 6 inches, the stripping width shall be increased to extend a minimum of 3 inches beyond the mortar. Ensure that all joints are fully reinforced before the field of the deck is waterproofed.

Change of Plans

Install 20 mils of the Black Pearl® Primer Adhesive into the horizontal-to-vertical junction a minimum of 7 inches onto the vertical and horizontal surface. Install the Black Pearl® Sheet Membrane a minimum of 6 inches onto the horizontal-to-vertical junction. Use these measurements to install a second ply. Install the complete system over the detailed area to a height that is 8" above water level, then terminate appropriately.

If detail of projections requires Polymethyl Methacrylate, please refer to Barrett's Ram Quick Flash PMMA technical data sheets and installation instructions and Membrane technical data sheets and installation instructions.

HORIZONTAL MEMBRANE APPLICATION

Horizontal Application

Apply 15-20 mils of Black Pearl® Primer Adhesive with a non-serrated straight edge squeegee at the rate of 80 sq ft/gal. Allow it to dry to a tacky condition (approximately 20 minutes) before installing the Black Pearl® Sheet Membrane. Adhesive must extend 1 inch beyond the sheet.

NOTE: Apply only as much adhesive as can be covered with a sheet before the self-priming adhesive loses tack. The ratio to follow when installing our Black Pearl® system is one pail (5 gal) of Black Pearl® Primer Adhesive for every one roll (66 ft) of Black Pearl® Sheet Membrane.

Rub the sheet into the Black Pearl® Primer Adhesive with a stiff broom, squeegee, hand garden roller, or similar method.

Lap all edge seams a minimum of 3 inches. Stagger all end laps a minimum of 6 inches. Ensure that total contact with the substrate is maintained. Any membrane "bridging" is unacceptable and will come back to haunt you the installer. Coat the top of the first ply with 15-20 mils of Black Pearl® Primer Adhesive at the rate of 80 sq ft/gal. Allow to dry to tack state. Smoothly embed the second ply, offsetting the side laps of the first ply by half a sheet's width. Any "Fishmouths" or wrinkles in the fabric need to be cut out and detailed.

If additional plies are specified, repeat the same procedure. With multiple ply application, check the adhesion of each ply by applying hand pressure to the sheet. If the sheet moves, delay the next ply application until the underlying sheet has set.

When all specified plies are installed, it is time to run the flood test (ASTM D-5957), or EVM survey (ASTM D-7877). If any leakage or voids are detected, repair the suspect area and retest until there is no leakage of any kind.

When testing is complete, uniformly coat the final sheet with 15-20 mils of Black Pearl® Primer Adhesive at the rate of 80 sq ft/gal. If specified, install a Ram Protection Course directly into the top coat of Black Pearl® Primer Adhesive, starting at the low points. Install any additional overburden such as aeration mats, root barriers, concrete pavers, stone ballast, and similar components in accordance with plans and specifications.

VERTICAL MEMBRANE APPLICATION

Footer Detail

Install 20 mils of the Black Pearl® Primer Adhesive into the horizontal-to-vertical junction a minimum of 7 inches onto the vertical surface and as far as possible onto the horizontal, leaving room for the termination bar. Install the Black Pearl® Sheet Membrane a minimum of 6 inches onto the horizontal-to-vertical junction. Repeat the previous step with 20 mils of Black Pearl® Primer Adhesive. Then install the complete system over the detailed area. All other detailing follows the installation guidelines for horizontal applications.

Vertical Surfaces

For applications on vertical surfaces, the Black Pearl® Sheet Membrane is to be applied in vertical strips and terminated at grade. Apply Black Pearl® Primer Adhesive at a rate of 80 sq ft/gal. Pre-cut sheets of the Black Pearl® Sheet Membrane to workable lengths (typically about 5 to 7 feet). Allow Black Pearl® Primer Adhesive to dry to a tacky state, then embed the sheets smoothly into the coating, ensuring that they fully adhere to the vertical substrate. Side laps shall be maintained at 3 inches. The bottom of the sheet shall start at the corner of the



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Vertical Surfaces (cont.)

previously applied base flashing and run up the vertical substrate to termination of the sheet. Ensure that the top edge of the sheet is sealed tight to the vertical substrate using either Black Pearl® Primer-Adhesive or Ram Mastic. The succeeding plies on vertical substrates should overlap the lower application plies by 4 inches.

Multiple plies shall be installed in the same manner as the first ply with offset side laps. For multiple ply applications, check the adhesion set-up of each ply by applying hand pressure to the sheet and exerting sideway pressure. If the sheet moves, delay installation of the next ply until the underlying plies are firmly set.

Where required, apply 20 mils of Black Pearl® Primer Adhesive at a rate of 80 sq ft/gal at the top edge of the topmost lift. Embed a sealing strip of Black Pearl® Sheet Membrane 8 to 9 inches wide, cut lengthwise from the sheet, directly into the coating with a handheld squeegee. For specified above-ground applications, install termination bars at the top of the membrane, fastened 8 inches on centers.

Inspection and approval of all waterproofing membrane installations shall occur before application of any protection, insulation board or other overburden. All warranted installations must be inspected and accepted by the Barrett Company before any overburden installation can occur. Protection courses for vertical substrates are recommended to be 1-inch thick and 1-pound minimum density expanded or extruded polystyrene, made or cut into 2 feet by 4 feet wide sheets and adhered with 20 mils of Black Pearl® Primer-Adhesive at a rate of 80 sq ft/gal. All protection course insulation shall be laid up in brick pattern.

PRODUCT SAFETY INFORMATION

Black Pearl® waterproofing products offer no unusual health or safety risks for products of this nature. As with any roofing and waterproofing installation process, proper ventilation, clothing and eye protection is important.

For specific product information, contact the Barrett Company for a current Material Safety Data Sheets for any and all Barrett products. Obtain Material Safety Data Sheets from manufacturers whose materials may be used in conjunction with the Barrett waterproofing system. For installation safety information, consult the National Roofing Contractors Association (NRCA), the Occupational Safety and Health Administration (OSHA), and any other informed sources.

The user should not assume that all safety measures are indicated or that other measures may not be required.

	PRODUCT	PACKAGING
PACKAGING	Black Pearl® Primer Adhesive	Pail (5 Gal)
	Black Pearl® Sheet Membrane	Roll (53 lbs) 39.5" x 66'
	Ram 200 Protection Course	Roll (80 lbs) 39" x 33'
	Ram 203 Protection Course	Roll (90 lbs) 39" x 49'
	Black Pearl® Butyl Tape	Roll (case) 1" x 1" x 14.5' 1/8" x 2" x 20' 1/8" x 4" x 50'

NOTE: All product literature (i.e., technical & safety data sheets, application instructions, etc.) is currently available to download from the "Resource Library" on our website.

For questions regarding detailed specifications, application information, or any other general inquiries, please reach out to your local Barrett Technical Representative. You can also call us directly at (800) 647-0100 or email us at info@barrettroofs.com

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Scan the code above to watch our

**BLACK PEARL® WATERPROOFING SYSTEM
INSTALLATION DEMO VIDEO**



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Properties

Description	Test Method	Test Results	Comments
2 Ply System, ASTM D-6769			
Breaking Strength, lbf/in	ASTM D-146	89 MD, 70 XD	
Elongation, %	ASTM D-146	46 MD, 64 XD	
Puncture Strength, lbf	ASTM E-154, S10	202	
Tear Strength, lbf	ASTM D-1004	25 MD, 23 XD	
Hydrostatic Resistance, (Mullen) psi	ASTM D-751 Procedure A	250	
Water Vapor Permeance, perms (desiccant)	ASTM E-96	0.04	
*Bonded Pull, lbs/Ft. ²	ASTM C-836	200	
Low Temp Crack Bridging	ASTM C-1305	-15°F	Pass
Extensibility After Heat Aging	ASTM C-1522		Pass
Adhesion Strength lbf/in, CMV	ASTM C-836	1.5	
Resistance to water, visual	ASTM D-2939 Section 15		Pass
Remain in-place during Application, visual	ASTM C-836		Pass
Wind Uplift	FM 4474/	200 lbs/Ft. ²	
Sheet Ductility	TAS 114D/	58°F	
Passes the ICC-ES AC 29 Table 1 for use as waterproofing and damproofing over concrete, CMU and plywood.			
Black Pearl Primer-Adhesive			
Solids Content %	ASTM C-1250	77	
Softening Point °F	ASTM D-36	220	
Penetration, 100g @ 77°F, dmm	ASTM D-5	162	
VOC - Rule 66 Naptha	EPA	<230 g/L.	



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Featured Projects | Black Pearl® Cold Applied Asphalt



1405 Point at Harbor Point, Birmingham, AL offers a unique living experience unlike anything else in Baltimore. A LEED Silver building, 1405 Point rises 17 stories above Baltimore's Inner Harbor. Residents have access to a variety of best-in-class amenities including a fitness center with yoga room, 11th floor pool overlooking the Inner Harbor, grilling stations, and a full media lounge.

Project Architects: *Populous*
General Contractors: *Brasfield & Gorrie*



South Boston Waterfront Transportation Center, Boston, MA is a unique, multi-faceted parking garage that includes the design and construction of a multi-level, multi-user parking facility on a portion of Massport's Core Block parcel in South Boston's Seaport District. Built over and supported by the I-90 tunnel structure, the facility supports 21,000 sq/ft of Black Pearl® Waterproofing.

Project Architects: *Fennick McCredie Architecture*
General Contractors: *Heritage Restoration, Inc*



Conklin Hall at SUNY Farmingdale State College, Farmingdale, NY houses student government & clubs, student activities staff, and a broadcast studio. In addition to offices and conference rooms, the two-story, 19,700 square-foot building includes a high-tech media lounge, game room and two outdoor patios, which are protected by Barrett's Black Pearl® Cold Asphalt Waterproofing System.

Project Architects: *BRB Architects*
General Contractors: *Restore Technologies*



Gant Science Complex at UCONN, Storrs, CT underwent significant renovations as part of Next Generation Connecticut, the 2013 initiative to expand educational opportunities, research, and innovation in the STEM disciplines at UConn. With a focus on improving the energy efficiency & performance of the 285k sq/ft campus landmark, the design included a 3,000 sq/ft Black Pearl® Plaza Deck Membrane.

Project Architects: *Goody Clancy*



Art Museums of Colonial Williamsburg, Williamsburg, VA saw their first large-scale expansion & upgrade in April 2017. The 65,000-square-foot expansion, which began in September 2017, includes a grand concourse that connects the building's two museums—And beneath that concourse lies 45,500 sq/ft of Barrett's Black Pearl® Waterproofing System.

Project Architects: *Samuel Anderson Architects*
Contractors: *Compass Contracting, Inc*



Bronx Commons, Bronx, NY is one of the most environmentally-friendly projects in the five boroughs, and helps raise the bar for sustainability in affordable housing development. With 305 units over 12 stories, Bronx Commons has been protected by 9,200 sq/ft of Black Pearl® Cold Applied Asphalt Waterproofing & Flashings, covered by a Ram 203 Protection Course.

Architects: *Danois Architects, PC*
General Contractors: *H Klein & Sons, Inc*



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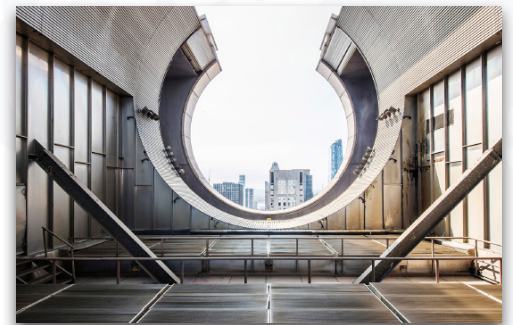


550 Madison Ave

Manhattan, NY | 7,271 sq. ft.

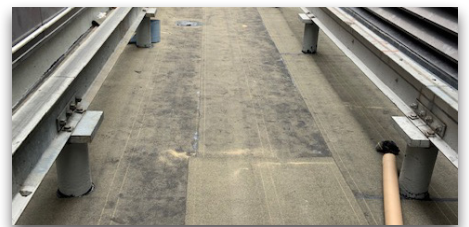
Property Owner: Olayan America; Chelsfield
Project Architects: Philip Johnson & John Burgee; Snøhetta
Waterproofing Contractors: Related Services
Roof/Membrane Inspector: Joseph Strickland
Waterproofing System: Black Pearl® Cold Applied Asphalt

Known to many as the Sony Tower and before that as the AT&T Building, the famed landmark skyscraper standing at 550 Madison is one of the latest to see a major renovation. Originally completed in 1984, the Philip Johnson and John Burgee-designed is possibly best known for its unique, Chippendale-style roof pediment.



The 37-story building has 852,830 square feet of rentable mixed-use space. The building features approximately 776,000 square feet of office space, prime retail frontage on Madison Avenue, and exhibition and museum space. At its base, the recently remodeled interior lobby features a LEED® Platinum and WELL Gold certified open public garden space designed by Snøhetta.

But at its peak, the iconic “Chippendale” pediment, which has occupied a pivotal part of the Manhattan skyline for almost 40 years, has been wrapped in Barrett’s Black Pearl® Cold Applied Asphalt Protected Membrane Roof System.



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What Makes Barrett the Best Value in Roofing and Waterproofing Systems?

Barrett has been serving the roofing and waterproofing industry since 1928 and specializing in hot fluid-applied rubberized asphalt since 1975. Decades of experience in the manufacturing, system design, and application of moisture protection systems allows Barrett to offer "World Class" specification and application support.

Barrett system designs and details do not compromise quality or long term performance for a competitive edge. Barrett is dedicated to the proven performance of polymer-modified asphalt technology and does not compromise its drive for excellence by offering less sustainable systems.

Roofing performance promises are easy to make, hard to deliver. Almost all roofing material manufacturers advertise and profess to offer the "best" or "ultimate" systems and to meet every need of every customer. But our systems and components often exceed industry standards and have developed a reputation for being "bulletproof." And with projects like the Lincoln and Jefferson Memorial, Fort Knox, the Martin Luther King, Jr. Memorial Library, Millenium Park, Terminal Tower, and more under our belt, it's easy to understand why.



2

Barrett projects (The Lincoln Memorial & the IMF Headquarters One and Two) have won the NRCA "Gold Circle Award."



4

Greenroof Roofscapes® with RamTough 250 have been awarded the prestigious GRHC "Award of Excellence."

Barrett's primary expertise in roofing and waterproofing technologies, combined with long-term relationships with suppliers of supplemental products, allow for single source designs and system warranties. Many years of "hands-on" installation experience has provided Barrett with the know-how to bring together roofing and waterproofing components into compatible system designs consistent with real-world workmanship to successfully complete unique projects.

Barrett offers a national network of approved contractors which have demonstrated their ability to install high-performance systems and a willingness to work cooperatively with others to meet overall project objectives. An RCI Registered Roof Consultant is on staff to service customers and lead the technical competencies of the company.

Unlike most of our direct competitors, Barrett products are "Made in the USA". Buying domestic products means improving our balance of trade, supporting our workforce, helping our economy, and sustaining environmental initiatives. Barrett products are available from distributors nationwide.



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